(No Model.)

H. M. ABERNETHY.

RAILWAY SIGNAL.

No. 600,054. Patented Mar. 1, 1898.

Fig. 2.

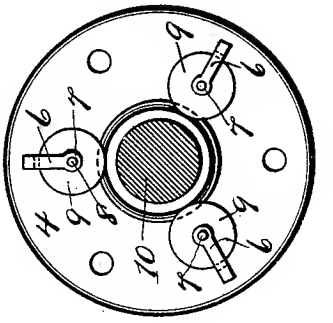
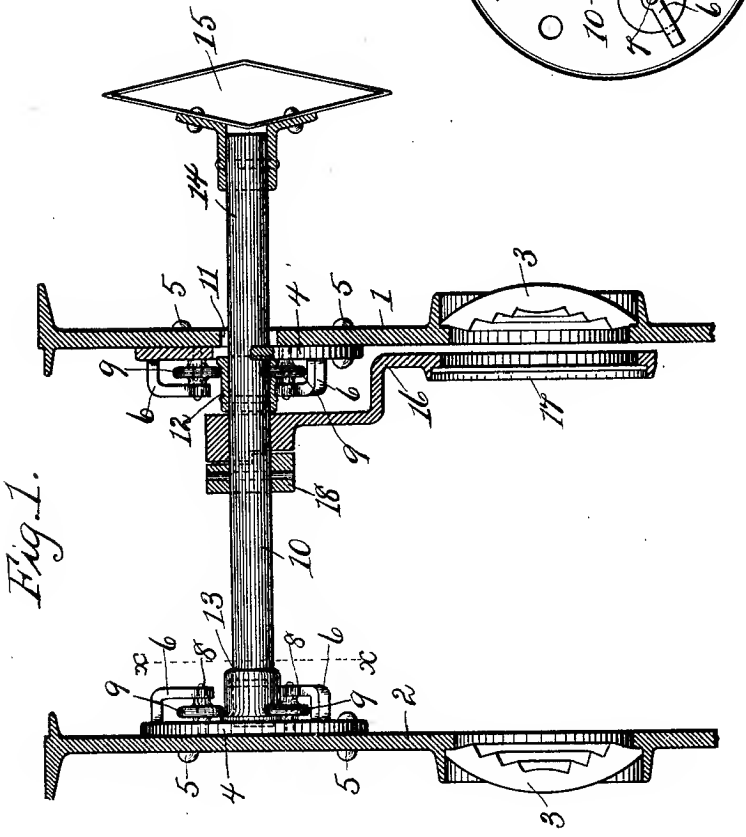


Fig. 1.



Witnesses.
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By Jas. L. Skidmore
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UNITED STATES PATENT OFFICE.

HARRY M. ABERNETHY, OF ELMIRA, NEW YORK, ASSIGNOR OF ONE-HALF TO H. H. FULTON, OF SAME PLACE.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 600,054, dated March 1, 1898.

Application filed January 6, 1897. Serial No. 618,205. (No model.)

To all whom it may concern:

Be it known that I, HARRY M. ABERNETHY, a citizen of the United States, residing at Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Railway-Signals; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to railway-signals of the class employing the rotating shaft carrying visual signals.

The object of the invention is to combine with the rotating shaft of a railway-signal antifriction devices which will permit the shaft when turned by the proper mechanism to move freely in its bearings, and thus insure a prompt movement of the signals carried by said shaft.

My invention is embodied in the mechanism illustrated in the accompanying drawings, and its characteristic features will be pointed out in the appended claims.

Figure 1 is a vertical section of a signal device constructed in accordance with my invention, and Fig. 2 is an enlarged sectional view on the line *x x* of Fig. 1.

The reference-numerals 1 and 2 indicate counterpart sections of the frame of the signal, each provided with the usual bull's-eye lens 3 and supported in any suitable manner. To the inner side of each of the frame-sections 1 and 2 I secure a disk or plate 4 by bolts 5, and at equidistant points from each other upon the disks 4 are secured three or more bracket-arms 6 of angular or other suitable form. The inwardly-projecting ends of the bracket-arms 6 are each formed with an eye 7 to receive the ends of the short shafts or gudgeons 8, the opposite ends of which have bearing in the disks 4, as shown. Upon each of the gudgeons 8 is mounted a roller 9.

The numeral 10 indicates the signal-shaft extending through an opening 11 in the frame-section 1 and provided with flanged collars 12 and 13, the flanges of said collars being arranged, as shown, to bear against the rollers 9. These collars 12 and 13 are keyed to the shaft 10 and turn therewith and serve as a tread-surface for the rollers. The projecting end 14 of the shaft 10 is adapted to carry a semaphore-signal 15 of diamond or other shape.

Arranged upon the shaft 10 within the frame 1 2 is an arm 16, keyed to the shaft and carrying at its outer end a colored signal 17, adapted to be thrown down in the rear of the bull's-eye lamps or raised away from the lens by the movement of the shaft 10.

The shaft 10 is provided with a collar 18 within the frame 1 2, which collar is keyed to said shaft and is so constructed and arranged with respect to the hub of the arm or frame 16 as to warrant the proper registering of the colored signal or signals carried by said arm or frame with respect to the bull's-eye lenses carried by the frame-sections 1 2.

The relative arrangement of the rollers and shaft is such that the latter is equally supported at all points and freely turns with little friction.

It will be understood that a slight departure may be made from the details of my invention, as illustrated and hereinbefore described, without departing from the spirit of my invention.

Having thus described my invention, what I desire to claim and secure by Letters Patent is—

1. In a railway-signal, the combination with a signal-casing, of a shaft extending through the casing and carrying visual signals, and roller-bearings mounted on shafts supported by brackets projecting from the inner sides of the casing, and having peripheral contact with the shaft.

2. In a railway-signal, the combination with a signal-casing and a shaft provided with flanged collars, of roller-bearings supported on fixed shafts projecting from the sides of the casing and bearing against the flanges of the collars.

3. The combination with the casing or framing of a railway-signal, of radially-arranged bracket-arms secured to the inner sides of the sections of the casing and projecting inwardly therefrom, gudgeons supported by said brackets, rollers mounted on said gud-

geons, and a shaft passing through the casing or framing, said shaft carrying visual signals and supported by said rollers, substantially as shown and described.

4. The combination with the casing or framing of a railway-signal, of disks or plates secured to the inner sides of the opposite sections of the casing, radially-arranged brackets secured to said disks or plates and projected inwardly therefrom, gudgeons having bearing in said brackets and disks, rollers mounted on said gudgeons, a signal-shaft passing through the signal casing or framing and supported by the rollers, said shaft being provided with flanged collars against which the rollers bear and with visual signals, substantially as described and for the purposes set forth.

5. In a railway-signal, the combination with a signal-shaft carrying a visual signal and flanged collars, of roller-bearings having peripheral contact with said collars and bearing against the flanges thereof, and a collar keyed to the shaft intermediate of said flanged collars for regulating the movement of the colored-signal frame, substantially as described.

6. In a railway-signal, the combination with the lenses, of a signal-shaft carrying a visual signal, roller-bearings having peripheral contact with the collars, a colored-signal frame supported by said shaft, and a collar keyed to said shaft adapted to regulate the movement of the colored-signal frame with respect to the lenses, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

HARRY M. ABERNETHY.

Witnesses:

J. A. ABERNETHY,

F. C. ABERNETHY.